

Quadratus Lumborum block (QL 3) versus Classic  
Lumbar Plexus block in Total Primary, Unilateral Hip  
Replacement Surgery: A Prospective, Randomized, Double-Blind,  
Active Comparator Trial

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**Official Title: A Prospective, Randomized, Double-Blind, Active-Comparator, Non-Inferiority  
study to observe relative efficacy of Ultrasound-Guided Supra-iliac Transmuscular Quadratus  
Lumborum block (QL 3) vs. classic Lumbar Plexus block in managing post-operative pain  
following total hip replacement surgery.**

**ClinicalTrials.gov ID (NCT number): NCT03801265**

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### **Statistical Analysis Plan**

All continuous variables will be compared between the two groups by Wilcoxon rank sum test and dichotomous variables will be compared by Chi-square test.  $P < 0.05$  will be considered statistically significant. SPSS 12.0 software will be utilized for statistical analysis. Intention to treat analysis will also be utilized for this study.

Sample size and power analysis. Sample sizes of 20 in the LP block group and 20 in the QL3 block group achieve  $\geq 90\%$  power to detect non-inferiority using a one-sided Mann-Whitney test assuming the actual distribution is normal. The margin of non-inferiority is 0.5. The true difference between the means is assumed to be -0.2. The significance level ( $\alpha$ ) of the test is 0.05. The data are drawn from populations with standard deviations of 0.7 and 0.3 (PASS 15 Power Analysis and Sample Size Software (2017). NCSS, LLC. Kaysville, Utah, USA, [ncss.com/software/pass](http://ncss.com/software/pass)).